

GCP HPC's Going Global

A sustainable future for the GCP cluster/grid HPC facilities



Poster 4.8

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Porting of R and Structure to alternative sustainable future Grid Computing platforms

Plus

A **FREE** High Performance Computing Platform for the GCP community !



Development, deployment, and support of HPC Grid applications:

GCP HPC application support for bioinformatics computations is ongoing from 2008, completing the close-out goals of

- Identifying sustainable HPC options beyond the existing GCP platform that are now aging, in particular the BOINC and EELA grids
- R and Structure being ported to both of these alternative platforms
- An upgraded HPC website (hpc.cip.cgiar.org) to

- * Improve documentation and use case support for the GCP community programs
- * Offer processing options beyond the GCP systems: BOINC and EELA grids:
A Do-It-Yourself guide is available to set up for FREE an HPC facility using the BOINC architecture, to run "R" and Structure
- * Improve HPC task performance for collaborators performing data analysis

Development and deployment of GCP compliant computational support on available high performance computational facilities and online data resources, for selected GCP molecular breeding platform use cases is the ongoing objective.

Development of a programmatic access to the program *Structure*, running as a Grid resource, that can be integrated in the GCP platform by complying with the existing GCP Platform APIs is the principal task for 2009.

The final goal is to provide more advanced computational support for scientists of the GCP and its partners, exploiting high performance computational (HPC) grid facilities for computationally intensive and/or high throughput analyses of project data.

Related GCP project–SP4 Commissioned G4005.27: High Performance Computing Facilities for the GenerationCP (PI: Anthony Collins, CIP, 2008), closing out, as now incorporated into SP4 Commissioned G4006.16: Development of an Integrated GCP Informatics Platform (PI: Martin Senger, IRRI, 2009)

